# Adobe<sup>®</sup> Illustrator<sup>®</sup>CC

# **CLASSROOM IN A BOOK**

The official training workbook from Adobe Systems

# Adobe<sup>®</sup> Illustrator<sup>®</sup>CC

# CLASSROOM IN A BOOK

The official training workbook from Adobe Systems

Adobe® Illustrator® CC Classroom in a Book®

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### **GETTING STARTED**

Adobe<sup>\*</sup> Illustrator<sup>\*</sup> CC is the industry-standard illustration application for print, multimedia, and online graphics. Whether you are a designer or a technical illustrator producing artwork for print publishing, an artist producing multimedia graphics, or a creator of web pages or online content, Adobe Illustrator offers you the tools you need to get professional-quality results.

#### About Classroom in a Book

Adobe Illustrator CC Classroom in a Book<sup>®</sup> is part of the official training series for Adobe graphics and publishing software developed with the support of Adobe product experts.

The lessons are designed so that you can learn at your own pace. If you're new to Adobe Illustrator, you'll learn the fundamentals you need to master to put the application to work. If you are an experienced user, you'll find that *Classroom in a Book* teaches many advanced features, including tips and techniques for using the latest version of Adobe Illustrator.

Although each lesson provides step-by-step instructions for creating a specific project, there's room for exploration and experimentation. You can follow the book from start to finish, or do only the lessons that correspond to your interests and needs. Each lesson concludes with a review section summarizing what you've covered.

#### Prerequisites

Before beginning to use *Adobe Illustrator CC Classroom in a Book*, you should have working knowledge of your computer and its operating system. Make sure that you know how to use the mouse and standard menus and commands, and also how to open, save, and close files. If you need to review these techniques, see the printed or online documentation for your Windows or Mac OS.

• Note: When instructions differ by platform, Windows commands appear first, and then the Mac OS commands, with the platform noted in parentheses. For example, "press the Alt (Windows) or Option (Mac OS) key and click away from the artwork." In some instances, common commands may be abbreviated with the Windows commands first, followed by a slash and the Mac OS commands, without any parenthetical reference. For example, "press Alt/ Option" or "press Ctrl/Command+click."

#### Installing the program

Before you begin using *Adobe Illustrator CC Classroom in a Book*, make sure that your system is set up correctly and that you've installed the required software and hardware.

You must purchase the Adobe Illustrator CC software separately. For complete instructions on installing the software, visit www.adobe.com/support. Illustrator and Bridge use separate installers. You must install these applications from Adobe Creative Cloud onto your hard disk. Follow the onscreen instructions.

#### Fonts used in this book

The Classroom in a Book lesson files use the fonts that come with Adobe Illustrator CC and install with the product for your convenience. These fonts are installed in the following locations:

- Windows: [startup drive]\Windows\Fonts\
- Mac OS X: [startup drive]/Library/Fonts/

For more information about fonts and installation, see the Adobe Illustrator CC Read Me file on the web at www.adobe.com/support.

#### Accessing the Classroom in a Book files

In order to work through the projects in this book, you will need to download the lesson files from peachpit.com. You can download the files for individual lessons, or download them all in a single file. Although each lesson stands alone, some lessons use files from other lessons, so you'll need to keep the entire collection of lesson assets on your computer as you work through the book.

To access the Classroom in a Book files:

- 1 On a Mac or PC, go to www.peachpit.com/redeem and enter the code found at the back of your book.
- 2 If you do not have a Peachpit.com account, you will be prompted to create one.
- **3** The downloadable files will be listed under Lesson & Update Files tab on your Account page.
- 4 Click the lesson file links to download them to your computer.

#### **Restoring default preferences**

The preferences file controls how command settings appear on your screen when you open the Adobe Illustrator program. Each time you quit Adobe Illustrator, the position of the panels and certain command settings are recorded in different preference files. If you want to restore the tools and settings to their original default settings, you can delete the current Adobe Illustrator *CC* preferences file. Adobe Illustrator creates a new preferences file, if one doesn't already exist, the next time you start the program and save a file.

You must restore the default preferences for Illustrator before you begin each lesson. This ensures that the tools and panels function as described in this book. When you have finished the book, you can restore your saved settings, if you like.

#### To delete or save the current Illustrator preferences file

- 1 Exit Adobe Illustrator CC.
- 2 Locate the Adobe Illustrator Prefs file as follows:
  - (Windows 7 [Service Pack 1], or Windows 8) The Adobe Illustrator Prefs file is located in the folder [startup drive]\Users\[username]\AppData\Roaming\ Adobe\Adobe Illustrator 17 Settings\en\_US\*\x86 or x64.
  - (Mac OS 10.6.8, 10.7, and 10.8<sup>\*\*</sup>) The Adobe Illustrator Prefs file is located in the folder [startup drive]/Users/[username]/Library/Preferences/Adobe Illustrator 17 Settings/en\_US<sup>\*</sup>.

\*Folder name may be different depending on the language version you have installed. \*\*On Mac OS 10.7 (Lion) and Mac OS 10.8 (Mountain Lion) the Library folder is hidden by default. To access this folder, in Finder, choose Go > Go To Folder. Type **~/Library** in the Go To Folder dialog box and then click OK.

• Note: If you cannot locate the preferences file, try using your operating system's Find command, and search for "Adobe Illustrator Prefs."

If you can't find the file, you either haven't started Adobe Illustrator CC yet or you have moved the preferences file. The preferences file is created after you quit the program the first time and is updated thereafter.

- **3** Copy the file and save it to another folder on your hard disk (if you wish to restore those preferences) or Delete it.
- 4 Start Adobe Illustrator CC.

#### To restore saved preferences after completing the lessons

- 1 Exit Adobe Illustrator CC.
- **2** Delete the current preferences file. Find the original preferences file that you saved and move it to the Adobe Illustrator 17 Settings folder.

Note: In Windows 7, the AppData folder is hidden by default. To make it visible, open Folder Options in Control Panel and click the View tab. In the Advanced Settings pane, find Hidden Files and folders and select Show Hidden Files and Folders or Show hidden files, folders, or drives.

► Tip: To quickly locate and delete the Adobe Illustrator preferences file each time you begin a new lesson, create a shortcut (Windows) or an alias (Mac OS) to the Adobe Illustrator 17 Settings folder.

• Note: You can move the original preferences file rather than renaming it.

#### **Additional resources**

Adobe Illustrator CC Classroom in a Book is not meant to replace documentation that comes with the program or to be a comprehensive reference for every feature. Only the commands and options used in the lessons are explained in this book. For comprehensive information about program features and tutorials, please refer to these resources:

Adobe Illustrator Help and Support: www.adobe.com/support/illustrator is where you can find and browse Help and Support content on adobe.com.

Adobe Creative Cloud Learning: for inspiration, key techniques, cross-product workflows, and updates on new features go to the Creative Cloud Learn page https://helpx.adobe.com/creative-cloud/tutorials.html. Available only to Creative Cloud members.

Adobe Forums: forums.adobe.com lets you tap into peer-to-peer discussions, questions and answers on Adobe products.

**Adobe TV:** tv.adobe.com is an online video resource for expert instruction and inspiration about Adobe products, including a How To channel to get you started with your product.

Adobe Design Center: www.adobe.com/designcenter offers thoughtful articles on design and design issues, a gallery showcasing the work of top-notch designers, tutorials, and more.

**Resources for educators:** www.adobe.com/education and http://edex.adobe.com offer a treasure trove of information for instructors who teach classes on Adobe software. Find solutions for education at all levels, including free curricula that use an integrated approach to teaching Adobe software and can be used to prepare for the Adobe Certified Associate exams.

Also check out these useful links:

Adobe Illustrator CC product home page: www.adobe.com/products/illustrator

Adobe Labs: http://labs.adobe.com gives you access to early builds of cuttingedge technology, as well as forums where you can interact with both the Adobe development teams building that technology and other like-minded members of the community.

#### Adobe certification

The Adobe training and certification programs are designed to help Adobe customers improve and promote their product-proficiency skills. There are four levels of certification:

- Adobe Certified Associate (ACA)
- Adobe Certified Expert (ACE)
- Adobe Certified Instructor (ACI)
- Adobe Authorized Training Center (AATC)

The Adobe Certified Associate (ACA) credential certifies that individuals have the entry-level skills to plan, design, build, and maintain effective communications using different forms of digital media.

The Adobe Certified Expert program is a way for expert users to upgrade their credentials. You can use Adobe certification as a catalyst for getting a raise, finding a job, or promoting your expertise.

If you are an ACE-level instructor, the Adobe Certified Instructor program takes your skills to the next level and gives you access to a wide range of Adobe resources.

Adobe Authorized Training Centers offer instructor-led courses and training on Adobe products, employing only Adobe Certified Instructors. A directory of AATCs is available at http://partners.adobe.com.

For information on the Adobe Certified programs, visit www.adobe.com/support/ certification/main.html.

#### Sync settings using Adobe Creative Cloud

When you work on multiple machines, managing and syncing preferences, presets, and libraries among the machines can be time-consuming, complex, and prone to error. The Sync Settings feature enables individual users to sync their preferences, presets, and libraries to the Creative Cloud. This means that if you use two machines, say one at home and the other at work, the Sync Settings feature makes it easy for you to keep those settings synchronized across two machines. Also, if you have replaced your old machine with a new one and have re-installed Illustrator, this feature will let you bring back all those settings on the new machine.

Syncing happens via your Adobe Creative Cloud account. All the settings are uploaded to your Creative Cloud account and then are downloaded and applied on another machine. In order to sync, you need the following:

- The machine to be synced is connected to the Internet.
- Be signed in to your Adobe Creative Cloud account.

#### First launch of Adobe Illustrator CC

When you launch Adobe Illustrator CC for the first time, with no previous sync information available, you will see a prompt asking whether you want to start the sync. You have the options to sync the settings, disable the syncing, or go to



preferences to set what is synced by clicking the Advanced button.

Click Sync Settings Now to initiate the sync if you wish to sync your settings.

# Sync settings on first launch if prior sync information is available

When you launch Adobe Illustrator CC with prior sync information available, say on another machine that is signed into your Adobe Creative Cloud account, you will see a prompt asking whether you would you like to use the settings from the cloud. To initiate the sync, click Sync Settings Now.

Illustrator may need to be restarted, or there could be a conflict with your existing settings. If Illustrator needs to be restarted for the settings to take effect, a sync



J	To apply settings, Illustrator needs to be restarted.	
	Restart Now Later	
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• Note: You need to initiate the sync manually; it does not happen automatically and it cannot be scheduled.

• Note: This figure is from Illustrator CC on Mac OS, after logging in with an Adobe ID and launching Illustrator CC.

• Note: This figure is from Illustrator CC on Windows, after logging in with the same Adobe ID as the Mac OS machine and launching Illustrator CC. status message asking to restart Illustrator appears in the lower-left corner of the Document window. You can also click the sync status button (()) in the lower-left corner of the document window.

#### Syncing conflicts

The ideal workflow is to sync settings on one machine (say your work machine), and then sync settings on your second machine (home computer). Sometimes this doesn't happen, though. The settings in the cloud and the settings on one of



your computers can become out of sync. If you try to sync when this is the case, you will see a conflict prompt in the lower-left corner of the Document window. Here's what each option means:

- **Sync Local:** sync local settings on this computer to the cloud; overwrite the cloud version with the local version of settings.
- **Sync Cloud:** sync from the cloud to this local computer; ignore changes made to the local settings and replace them with the settings in the cloud.
- Keep Latest File: keep the latest settings based on the timestamp.

The settings are downloaded to your local machine and are updated in the application. Subsequently, if you make changes to preferences, presets, and libraries, you should initiate sync before

æ	
(3) support@askbrianwood.com Last Sync: Apr 19, 2013; 4:38 PM	
Sync Settings Now	
	Selection

you close the application. You can see the sync status in the left-bottom corner of the document status bar.

#### Setting sync options

You can easily manage your account, change what gets synchronized with Adobe Creative Cloud, and what to do in case of a conflict.

 Choose Edit > Preferences > Sync Settings (Windows) or Illustrator > Preferences > Sync Settings (Mac OS) and set options in the Preferences dialog box that appears.

Tip: You can also choose Edit > [username] > Manage Sync Settings (Windows) or Illustrator > [username] > Manage Sync Settings (Mac OS).

		references	
Sync Settings Selection & Anchor Display Type Guides & Grid Guides & Grid Suites Islees Islees Islees Ing-Ins & Scatch Disks User Interface File Handling & Clipboard Appearance of Black	Signed in as: supportight Las Smc: Apr 19, 20 Sync: Atl Settings Option Sync: All Settings V Preferences V Presets V Swatches V Brushes V East Asian Setting When Conflict Occur	kkrameod com 13. 438 PM * Workspaces * Keyboard Shortcuts * Graphic Shyles 5 Graphic Shyles 14. Ask My Preference *	Sync Settings Naw

• Note: To sync your settings successfully, you must make changes to the settings only from within the application. The sync does not identify any manual changes done in these locations. This also applies to any libraries (swatches, symbols, etc.) copied and pasted into preferences folders.

## WHAT'S NEW IN ADOBE ILLUSTRATOR CC

Adobe<sup>®</sup> Illustrator<sup>®</sup> CC is packed with new and innovative features to help you produce artwork more efficiently for print, web, and digital video publication. In this section, you'll learn about many of these new features—how they function and how you can use them in your work.

#### Adobe Illustrator and Adobe Creative Cloud

With all-new Adobe Illustrator CC , you always have the latest version, because access to every future release is built right in. Cloud-enabled features, like Sync Fonts, Sync Colors, and Sync Settings, turn any workspace into your workspace.



#### Touch Type tool

Design with type in a powerful new way. Characters can now be manipulated like individual objects. Experiment with moving, scaling, and rotating, knowing that you can edit or change the font at any time. And you can now use multitouch devices, as well as a mouse or stylus.





#### Images in brushes

Paint with a brush made from a photo. Art, Pattern, and Scatter brushes can contain raster images, so you can create complex organic designs quickly—with simple brush strokes. As with all Illustrator brushes, your strokes can be reshaped and modified at will.



#### **Text improvements**

Find the perfect font—fast. In the Character panel, type a style, such as **bold** or **italic**, a font family, or any other part of a font name. You'll get a filtered view that lets you see just the fonts that match your criteria. Work faster with type, even in your most complicated, type-intensive designs. Text that wraps around objects and type that is set in multiple connected text frames now refresh quickly when you make a change. Instantly switch between area type and point type. Text object conversion is now instantaneous so you can design freely in your text layouts. And you can work just as easily with imported type, switching formats at any time.



#### **Image enhancements**

Import multiple files into your Illustrator layout at the same time and with new control. Now you can define the location and scale of your files—images, graphics, and text—and use new thumbnail views to see where each file will go and how big it will be. Easily unembed images that have been placed and embedded in an Illustrator file. You can quickly make images available for editing or extract files embedded in artwork you received from someone



else. Links to the image files are created automatically. Get more complete information about any placed file in the Links panel. All of your placed elements—images, graphics, and text—appear in the Links panel, where you can track them with greater control than ever before.

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#### **CSS** extraction

Hand-coding web elements, such as icons and patterns, can be frustrating. Now create websites faster by letting Illustrator generate Cascading Style Sheet (CSS) code for you, even for a complete logo that includes gradients. Copy and paste the code right into your web editor, or export the styling to a CSS file.



#### **On-art Free Transform**

Get hands-on with the power of the Free Transform tool. Move, scale, and rotate objects directly using a touchscreen device. Or use a mouse or other pointer right on the artboard to transform objects in a more immediate and intuitive way.

#### Package files

File packaging automatically gathers and saves the necessary fonts, linked graphics, and a package report into a single folder. Efficiently hand off Illustrator files to production, or keep your working files organized by packaging up your project.

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Folder name: marketposter
Options ✓ Copy Links
✓ Collect links in separate folder ✓ Relink linked files to document
Copy Fonts used in document (Except CJK)
✓ Create Report
Package Cancel

#### Other enhancements

- Kuler for color syncing—Capture color themes out in the world with the Adobe Kuler<sup>®</sup> iPhone<sup>®</sup> app. Share your themes and explore thousands of others available on the Kuler website. Sync your favorite themes with Adobe Creative Cloud<sup>™</sup>, and they'll be accessible immediately in Illustrator.
- White Overprint—Suppress objects with White Overprint in Print and PDF.
- Separations Preview—Make the most of the improved Separations Preview panel (with Show Used Spot Colors Only selected in the panel).
- Improved find in the Swatches panel, swatch libraries, and the Color Picker dialog box.
- Auto corners for pattern brushes—Get the corners you want without extra steps. Create pattern brushes swiftly with auto-generated corners that perfectly match the rest of the stroke. No need to tediously create special corners for your sharp angles.

Although this list touches on just a few of the new and enhanced features of Illustrator CC, it exemplifies Adobe's commitment to providing the best tools possible for your publishing needs. We hope you enjoy working with Illustrator CC as much as we do.

-The Adobe Illustrator CC Classroom in a Book Team

## A QUICK TOUR OF ADOBE<sup>®</sup> ILLUSTRATOR<sup>®</sup> CC

#### Lesson overview

In this interactive demonstration of Adobe Illustrator CC, you'll get an overview of the application while you use a few of the exciting new features.



This lesson takes approximately an hour to complete.

Download the project files for this lesson from the Lesson & Update Files tab on your Account page at www.peachpit.com and store them on your computer in a convenient location, as described in the Getting Started section of this book.

Your Accounts page is also where you'll find any updates to the chapters or to the lesson files. Look on the Lesson & Update Files tab to access the most current content.



In this demonstration of Adobe Illustrator CC, you will be introduced to new and exciting application features, like the Touch Type tool and type selection, as well as some key fundamentals for working in the application.

#### **Getting started**

For the first lesson of this book, you will get a quick tour of the tools and features in Adobe Illustrator CC, offering a sense of the many possibilities. Along the way, you will create a flyer for a pizza restaurant.

- 1 To ensure that the tools and panels function exactly as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CC preferences file. See "Restoring default preferences," on page 3.
- 2 Start Adobe Illustrator CC.

#### Sync settings using Adobe Creative Cloud™

When you launch Adobe Illustrator CC for the first time, with no previous sync information available, you will see a prompt asking whether you want to start a sync with Adobe Creative Cloud. For more information on syncing with the Creative Cloud, see "Sync settings using Adobe Creative Cloud" on page 6.

• If you are launching Adobe Illustrator for the first time or if you see a dialog box appear, click Disable Sync Settings or Sync Settings Now.

#### Creating a new document

An Illustrator document can contain up to 100 artboards (*artboards* are similar to *pages* in a program like Adobe InDesign<sup>®</sup>). Next, you will create a document with two artboards.

- 1 Choose Window > Workspace > Reset Essentials.
- 2 Choose File > New.
- 3 In the New Document dialog box, change only the following options (leaving the rest at their default settings):
  - Name: pizza\_ad
  - Number Of Artboards: 2
  - Size: Letter (the default setting)

Click OK. A new blank document appears.



4 Choose File > Save As. In the Save As dialog box, leave the name as pizza\_ad.ai and navigate to the Lesson00 folder. Leave the Save As Type option set to Adobe Illustrator (\*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.

• Note: If you don't see "Reset Essentials" in the Workspace menu, choose Window > Workspace > Essentials before choosing Window > Workspace > Reset Essentials.

downloaded the project files for this lesson to your computer from your Account page, make sure to do so now. See "Getting Started" at the beginning of

Note: If you have not already

the book.

**5** Choose View > Rulers > Show Rulers to show rulers in the Document window.

#### 6 Select the Artboard

tool (‡) in the Tools panel on the left. Click the center of the white artboard with the 02 - Artboard 2 label in the upper-left corner, to select it.



In the Control panel, above the artboards, click the Landscape button (
).

7 Position the pointer over the selected artboard, and drag it to the right until there is a gray gap between the two artboards.

Illustrator allows you to have artboards of differing sizes and orientations.

- 8 Select the Selection tool () in the Tools panel to stop editing the artboards. Click the artboard on the right (the landscape, or horizontal, artboard) to make it the active artboard.
- 9 Choose View > Fit Artboard In Window.

#### **Drawing shapes**

Drawing shapes is the cornerstone of Illustrator, and you will create many of them in the coming lessons. Next, you will create several shapes.

 Select the Rectangle tool (□) in the Tools panel. Position the pointer in the upper-left corner of the artboard (see the red X in the figure). When the word "intersect" appears next to the pointer, click and drag down and to the right edge of the white artboard. When



the gray measurement label shows a width of 792 pt and a height of 400 pt, release the mouse button. It does not have to be exact.

- 2 Click and hold down on the Rectangle tool in the Tools panel. Click to select the Polygon tool ().
- 3 Click roughly in the center of the artboard to open the Polygon dialog box. Change the Radius to 200 pt and the Sides value to 3 by typing in the values. Click OK to create a triangle that will become a slice of pizza.



• Note: Learn more about creating new documents in Lesson 3, "Creating and Editing Shapes." Learn more about editing artboards in Lesson 4, "Transforming Objects."

• Note: Learn more about creating and editing shapes in Lesson 3, "Creating and Editing Shapes."

#### **Applying color**

• Note: Learn more about creating and applying color in Lesson 6, "Color and Painting." Applying colors to artwork is a common Illustrator task. Experimenting and applying color is easy using the Color panel, Swatches panel, Color Guide panel, and Edit Colors/Recolor Artwork dialog box.

- Select the Selection tool () in the Tools panel on the left, and click anywhere in the rectangle you drew, to select it.
- 2 Click the Fill color in the Control panel to reveal the Swatches panel (circled in the figure). Position the pointer over the black swatch (in the top row of colors). When the tool tip appears that shows "Black," click to apply the black swatch to the fill. Press the Escape key to hide the Swatches panel.
- Click the Stroke color in the Control panel (circled in the figure). Click the None color (∠) to remove the stroke (border) of the rectangle. Press the Escape key to hide the Swatches panel.
- 4 Click anywhere inside of the white triangle you created, to select it.





5 Double-click the white Fill box located near the bottom of the Tools panel. In the Color Picker dialog box, change the CMYK values to C=5, M=70, Y=100, K=25. Click OK to create a new color that is applied to the fill of the triangle.





Double-click the Fill box. Edit the color in the Color Picker dialog box.

- 6 Click the Stroke color in the Control panel. Click the light orange color with the tool tip "C=0 M=35 Y=85 K=0" to paint the stroke of the triangle.
- 7 Choose File > Save, and leave the triangle selected for the next section.



• Note: The stroke is currently very small, so you may not see the color change on the stroke yet.

#### **Editing strokes**

In addition to changing the color of strokes, you can also format them in many other ways. That's what you'll do next with the triangle.

 With the triangle still selected, click the underlined word "Stroke" in the Control panel above the document, to open the Stroke panel. Change the Stroke Weight to 3 pt in the Stroke panel that appears. Press the Escape key to hide the Stroke panel.



With the Selection tool (), Shift-click the black rectangle to select it, too. Choose Object > Hide > Selection to temporarily hide the rectangle and the triangle.

#### Creating shapes using the Shape Builder tool

The Shape Builder tool is an interactive tool for creating complex shapes by merging and erasing simpler shapes. Next, you will finish a city skyline created using the Shape Builder tool.

 Choose File > Open, and open the city.ai file in the Lesson00 folder in the Lessons folder on your hard disk.

The city.ai file contains a series of simple shapes that were merged to

create a single city shape. You'll finish the shape by adding another building and creating some windows using the Shape Builder tool.

- 2 Choose View > Fit Artboard In Window.
- 3 With the Selection tool (k) selected, click the single building on the far right. Drag it to the left. As you drag, press the Shift key to constrain its movement. When the left edge of the building "snaps" to the right edge of the city shape, release the mouse button and then release the Shift key.



• Note: Learn more about working with strokes in Lesson 3, "Creating and Editing Shapes."

• Note: Learn more about working with the Shape Builder tool in Lesson 3, "Creating and Editing Shapes." 4 Choose Select > All On Active Artboard to select the city shapes.

The larger city shape and the individual building are selected, but also notice the three rectangles on one of the buildings that will become windows.

5 Select the Shape Builder tool () in the Tools panel. Position the pointer to the right of all of the selected shapes (see the red X in the figure), and drag to the left into the larger city shape. Release the mouse button.

This combines those two shapes into one.

6 Position the pointer over one of the smaller rectangles (where the red circle



is in the figure below). Holding down the Alt (Windows) or Option (Mac OS) key, when you see the mesh pattern appear in the fill of the object (*not* a red stroke), click to subtract the highlighted shape from the city shape. Still pressing the Alt (Windows) or Option (Mac OS) key, click inside of the remaining two window shapes.



Position the pointer.

Click to remove the path.

Notice the final result.

- 7 Select the Selection tool () in the Tools panel on the left, and make sure that the city shape is still selected. Choose Edit > Copy.
- 8 Choose File > Close to close the file without saving.
- 9 Choose Edit > Paste, back in the pizza\_ad.ai file, to paste the shape in the center of the Document window.
- 10 With the Selection tool, click and drag the shape up toward the top of the artboard. Keep the shape in the horizontal center of the artboard (as best you can), and stop short of the top of the artboard.



As you drag, you will see green alignment guides and a gray measurement label. These are a part of the Smart Guides feature you will learn about in a later lesson.

#### Creating and editing gradients

*Gradients* are color blends of two or more colors that you can apply to the fill or stroke of artwork. Next, you will apply a gradient to the city shape.

- 1 Choose View > Fit Artboard In Window.
- 2 With the city shape still selected, choose Window > Gradient to show the Gradient panel on the right side of the workspace.
- **3** In the Gradient panel, change the following options:
  - Click the black Fill box (circled in the figure), if it's not already selected, so that you can apply the gradient to the fill of the city shape.
  - Click the Gradient menu button ( ) to the left of the word "Type," and choose White, Black from the menu.
  - Choose 90 from the Angle menu.







Select the Fill box.

Apply the White, Black gradient.

Adjust the angle of the gradient.

- 4 Click the white color stop in the Gradient panel (circled in the figure below), and click the arrow to the right of the Opacity value below it. Choose 0%.
- **5** Double-click the black color stop on the right side of the gradient slider in the Gradient panel (circled in the figure below). In the panel that appears, change the Opacity value to **20%** by clicking the arrow to the right of the Opacity value and choosing 20%. Click the Color button (, and click the white color box to apply a white color. Press the Escape key to hide the Color panel.

• Note: In the Color panel that appears, you may only see a K (black) slider, and that's okay.

6 Choose Object > Show All to show the triangle and rectangle again.

7 Choose Select > Deselect, and then choose File > Save.







Edit the white color opacity.

Edit the black color.

Notice the result.

• Note: Learn more about working with gradients in Lesson 10, "Blending Colors and Shapes."

#### Working with layers

Note: Learn more about working with layers and the Layers panel in Lesson 8, "Working with Layers." Layers allow you to organize and more easily select artwork. Next, using the Layers panel, you will organize your artwork.

- 1 Choose Window > Layers to show the Layers panel in the workspace.
- 2 Double-click directly on Layer 1 (the layer name) in the Layers panel. Type Background, and press Enter or Return to change the layer name. Naming layers can be helpful when organizing content. Currently, all artwork is on this layer.
- 3 Click the Create New Layer button () at the bottom of the Layers panel. Double-click Layer 2 (the new layer name), and type **Content**. Press Enter or Return.







Rename Layer 1.

Create a new layer.

Rename the new layer.

- **4** With the Selection tool (**№**), click to select the triangle (make sure not to select the city shape that's on top of it). Choose Edit > Cut.
- 5 Click the eye icon () to the left of the Background layer name to temporarily hide the contents of the layer on the artboard. Layers can make it easier to hide and lock content temporarily so you can focus on other artwork.
- 6 Click once on the layer named Content to select it in the Layers panel. New artwork is added to the selected layer.



7 Choose Edit > Paste, to paste the triangle on the selected layer (Content).



8 Leave the triangle selected for the next section, and then choose File > Save.

#### Working with the Width tool

The Width tool allows you to create a variable width stroke and to save the width as a profile that can be applied to other objects. Next, you'll make the stroke of the triangle look like pizza crust.

1 Select the Width tool () in the Tools panel. Position the pointer over the bottom edge of the triangle, close to the left end (circled in the figure). When the pointer shows a plus sign (+) next to it, drag down, away from the center of the triangle. When the gray measurement label next to the pointer shows a Width of approximately 40 pt, release the mouse button.

Position the pointer.

- **2** Position the pointer a little to the right of where you just dragged the stroke. Starting at the bottom edge of the stroke (circled below), click and drag up, toward the center of the triangle. When the gray measurement label shows a Width of approximately 27 pt, release the mouse button.
- 3 Continue along the same pizza edge, adding a few more width points, alternating between dragging toward the center of the pizza and away from the center. Stop at the end of the stroke on that edge, as shown in the figure.







#### Creating a pattern

In addition to colors, the Swatches panel can also contain patterns. Illustrator provides sample swatches of each type, in the default Swatches panel, and lets you create your own patterns. In this section, you'll create a topping for the pizza using a pattern.

1 Click and hold down on the Polygon tool  $(\mathbf{\Phi})$  in the Tools panel. Click to select the Ellipse tool (). In a blank area below the triangle, click. In the Ellipse dialog box, change the Width and Height values to 4 pt. Click OK.

Note: Learn more about patterns in Lesson 6, "Color and Painting."

**Tip:** You can always choose Edit > Undo Width Point Change to remove the last point and try again.

Note: Learn more about the Width tool in Lesson 3, "Creating and Editing Shapes."









Notice the result.



- **2** Select the Zoom tool (**Q**) in the Tools panel. Click four times, *slowly*, directly on the new circle to zoom in.
- 3 Select the Selection tool (h), and with the circle still selected, choose Edit > Copy, and then choose Edit > Paste. Paste (Edit > Paste) three more times to create five circles. All of the circle copies are on top of each other. Drag each from the center and position them like you see in the figure. They don't have to match exactly.
- 4 With the Selection tool, position the pointer in a blank area of the artboard near the circles. Click and drag across all of the circles to select them.
- 5 Choose Object > Pattern > Make. Click OK in the dialog box that appears.
- **6** In the Pattern Options panel, change the following options:
  - Name: toppings
  - Tile Type: **Hex By Column** (Choose from the menu.)
  - Width: **26 pt** (Type the value.)
  - Height: **22 pt** (Type the value.)

If your pattern looks different, that's okay. If the circles are overlapping too much or not enough for your taste, try making the Width and Height values in the Pattern Options panel larger or smaller.

- 7 Choose Select > All. Change the Stroke weight to 0, by pressing the down arrow to the left of the stroke value until it disappears, in the Control panel above.
- 8 Change the Opacity value to 50% in the Control panel by clicking the arrow to the right of the Opacity value and choosing 50% from the menu.
- 9 Change the Fill color for all of the circles to an orange color with the tool tip that shows "C=0 M=35 Y=85 K=0." Press the Escape key to hide the Swatches panel, if necessary.










- **10** Choose Select > Deselect.
- 11 Shift-click the topmost and bottommost circles (within the hexagon shape). Change the Fill color to white in the Control panel. Press the Escape key to hide the Swatches panel.
- **12** Click Done in the gray bar above the artwork to finish editing the pattern.





**13** With the Selection tool (**\)**, drag across the original circles to select them. Press the Backspace or Delete key to delete them. You'll apply the pattern shortly.

# Working with symbols

A *symbol* is a reusable art object stored in the Symbols panel. You will now create a symbol from artwork.

- Select the Ellipse tool () in the Tools panel. Click in the blank area of the artboard, below the pizza. In the Ellipse dialog box, change the Width and Height values to 70 pt. Click OK to create a circle.
- 2 With the circle selected, change the Stroke color to None (☑) in the Control panel. Press the Escape key to hide the Swatches panel.
- 3 Double-click the Fill box near the bottom of the Tools panel. In the Color Picker dialog box that appears, change the CMYK values to C=5, M=100, Y=90, K=60. Click OK to create the color and close the Color Picker.



• Note: Learn more about working with symbols in Lesson 14, "Working with Symbols."

- **4** Choose Window > Symbols to show the Symbols panel.
- 5 Select the Selection tool (k) in the Tools panel. With the circle still selected, click the New Symbol button (a) at the bottom of the Symbols panel.
- 6 In the Symbol Options dialog box, name the symbol **topping**, and click OK. The circle now appears as a saved symbol in the Symbols panel.
- 7 Choose View > Fit Artboard In Window.
- 8 Drag the original circle (that you used to make the symbol) onto the pizza shape (see the figure below for location).



9 From the Symbols panel, drag a symbol from the topping symbol thumbnail onto the pizza slice.

Drag five more topping symbols from the Symbols panel onto the pizza, for a total of six circles. Position them like you see in the figure (even hanging them off the edge), and don't cover the crust. Leave one of them selected on the artboard.

**10** Choose Select > Same > Symbol Instance. Choose Object > Group.



Drag a topping symbol onto the pizza.

Notice the result.

# Working with the Appearance panel

more The Appearance panel allows you to control an object's attributes, such as stroke, fill, and effects. Next, you will edit the topping symbol using the Appearance panel.

- 1 In the Symbols panel, double-click the topping symbol thumbnail to edit the symbol artwork.
- **2** Choose Select > All to select the circle.
- 3 Choose Window > Appearance to open the panel. At the bottom of the Appearance panel, click the Add New Fill button () to add a new fill to the shape. Click the red Fill color box in the new Fill



• Note: Your topping symbol instances may be in different locations than those in the figure. That's okay.

• Note: Learn more about working with the Appearance panel in Lesson 13, "Applying Appearance Attributes and Graphic Styles." row added. Select the toppings swatch in the Swatches panel that appears, to apply the pattern. Press the Escape key to hide the Swatches panel.







Click the Add New Fill button.

Apply the pattern you created as a second fill.

**4** Double-click a blank area of the artboard to stop editing the symbol and to update all of the topping instances on the pizza.

# Creating a clipping mask

A *clipping mask* is an object which masks other artwork so that only areas that lie within its shape are visible—in effect, clipping the artwork to the shape of the mask. Next, you will copy the pizza slice and use the copy to mask the symbol instances.

- 1 With the Selection tool (♠) selected, click the pizza triangle (not the symbol group).
- 2 Choose Edit > Copy, and then choose Edit > Paste In Front to paste a copy directly on top of the original pizza slice.
- **3** Choose Object > Arrange > Bring To Front to arrange the triangle on top of the symbol group.
- **4** Press the Shift key, and click one of the symbol instances (the large circles) that is showing from behind the pizza slice, to select the triangle and the group.
- **5** Choose Object > Clipping Mask > Make.







Create the clipping mask.

**6** Choose Select > All On Active Artboard, and then choose Object > Group.

• Note: Learn more about working with clipping masks in Lesson 15, "Combining Illustrator CC Graphics with Other Adobe Applications."

• Note: The figure shows the values after entering the Width value but before pressing Enter or Return.

• Note: Learn more about working with brushes in Lesson 11, "Working with Brushes."

• Note: If you don't see "Reset Essentials" in the Workspace menu, choose Window > Workspace > Essentials before choosing Window > Workspace > **Reset Essentials.** 

7 With the group of objects selected, click the underlined X, Y, W, or H (or the word Transform) in the Control panel above the artwork to open the Transform panel. Click in the center point of the reference point locator (E), if it's not already selected, to scale the object from the center. Select Scale Strokes & Effects (located at the bottom of the panel).



Change the Rotate value to 180, and click the Constrain Width And Height Proportions button (III). Change the W: (Width) to 500 pt. Press Enter or Return to accept the values and close the Transform panel.

8 Choose Object > Expand Appearance, and then choose Object > Hide > Selection.

# Working with brushes

Brushes let you stylize the appearance of paths. You can apply brush strokes to existing paths, or you can use the Paintbrush tool to draw a path and apply a brush stroke simultaneously.

- 1 Choose Window > Workspace > Reset Essentials.
- 2 Choose Window > Brushes to show the Brushes panel. Click the Charcoal - Feather brush.
- 3 Change the Fill color in the Control panel to None  $(\square)$  and the Stroke color to a red color with the tool tip "C=0 M=90 Y=85 K=0." Press the Escape key to hide the Swatches panel.
- 4 Change the Stroke weight to **3 pt** in the Control panel above the artwork.
- **5** Select the Paintbrush tool  $(\checkmark)$  in the Tools panel. Position the pointer on the left edge of the artboard, almost halfway down from the top (see the red X). Click and drag from left to right, to the right edge of the artboard, up and down to create a wave. See the figure for the shape to draw.



atches Brushes Symbo

arcoal - Feather

You can always choose Edit > Undo Art Stroke to try again.

- 6 Select the Selection tool (**b**), and click the new red path to select it.
- 7 Choose Object > Hide > Selection to hide the path.



# Working with type

Next, you will add some text to the project and apply formatting.

- Select the Type tool (T) in the Tools panel, and click in the artboard. Type City Pizza. With the cursor in the text, choose Select > All to select it.
- 2 In the Control panel above the artwork, click in the Font field (to the right of the word "Character"). Type chap, and notice the font list that appears beneath the field. Click Chaparral Pro Bold Italic in the font list to apply it.

		,O., chap	3 🔹 Regular	▼ ÷ 12 pt	Paragraph:	
-	_	Chaparral Pro Light Ita	lic	(	O Sample	
18	0  216	Chaparral Pro			() Sample	576
		Chaparral Pro Italic			() Sample	
	~					
		Chaparral Pro Bold Ital	ic 📐		() Sample	

- **3** Type **144** in the Font Size field (to the right of the Font Family), and press the Enter or Return key.
- 4 With the text still selected, change the Stroke color in the Control panel to None (☑), if necessary, and change the Fill color to white.
- 5 Choose Window > Layers, and click the visibility column to the left of the Background layer to show the contents of the Background layer.
- 6 Select the Selection tool (), and drag to position the text to roughly look like the figure.





• Note: Your Layers panel may not look the same as it is in the figure, and that's okay.

Next, you will adjust several individual letters using the Touch Type tool.

- With the text object still selected, choose Window > Type > Character. Click the Touch Type Tool button to select the Touch Type tool.
- 2 Position the pointer over the "C" in "City," and click. The letter is now selected. Drag the upper-right corner point away from the center of the letter to make it larger. Stop dragging when the gray measurement label shows a width and height of approximately 135%.



about working with type in Lesson 7, "Working with Type." Tip: If you don't see

Note: Learn more

Tip: If you don't see the Character options in the Control panel, click the word "Character" to see the Character panel.

- 3 Position the pointer over the rotation point above the box around the selected letter. Drag to the left until the measurement label that appears next to the pointer shows approximately 8°.
- 4 Click the letter "i" in "City" to select it. Drag it to the left until it's closer to the "C." Make sure that the gray measurement label shows 0 (it will change if you drag up or down—so drag straight across). See the figure for help.



- 5 Click to select the "P" in "Pizza." Drag the upper-right corner point away from the center until the gray measurement label shows a width and height of approximately 135%. Drag the letter "P" left, closer to the "y" in "City."
- 6 Click to select the letter "i" in "Pizza." Drag it to the left, closer to the letter "P."
- 7 Choose Object > Show All, and then choose Select > Deselect.
- 8 With the Selection tool (**h**), click in the text and drag it to the center of the artboard, over the wavy red line you drew earlier (see the figure).



Drag the "P."

P::::

Drag the "i."



Position the text.

# Working with perspective

You will now create a pizza box in perspective.

- 1 Click the First artboard button (1) in the lower-left corner of the Document window to navigate to the first artboard and to fit it into the Document window.
- **2** Select the Perspective Grid tool (<u>h</u>) in the Tools panel to show the grid.
- 3 Choose View > Perspective Grid > Two Point Perspective > [2P-Normal View]. This centers the grid on the first artboard.
- **4** Select the Rectangle tool (**(**) from the Ellipse tool (**(**) group in the Tools panel.
- 5 Click the Left Grid(1) in the Plane Switching Widget in the upper-left corner of the Document window to select the left grid (if it's not already selected). A tool tip will appear when you position the pointer over it.



• Note: Learn more about perspective in Lesson 9, "Working with Perspective Drawing."

- 6 Position the pointer over the bottom, center point of the grid (circled in the figure). When the word "intersect" appears next to the pointer, drag up and to the left to create a rectangle that has a height of 60 pt and a width of 570 pt (as shown in the gray measurement label next to the pointer as you draw).
- 7 With the rectangle selected , change the Fill color to a medium gray swatch with the tool tip that displays "C=0 M=0 Y=0 K=40," and change the Stroke color to None (☑), in the Control panel. Press the Escape key to hide the Swatches panel.



**Tip:** The pointer snaps to the grid lines by default in the perspective grid to make it easier to achieve the correct size.



• Note: The rectangle may be a bit hard to see. As long as it changes color, it's okay.

- 8 Click the Right Grid(3) in the Plane Switching Widget in the upper-left corner of the Document window to select the right grid (see the figure below).
- **9** With the Rectangle tool selected, position the pointer over the origin point again (circled in the figure below). Click and drag up and to the right to create a rectangle that also has a height of 60 pt and a width of 570 pt.
- **10** In the Control panel, change the Fill color to a lighter gray swatch with the tool tip "C=0 M=0 Y=0 K=20." Press the Escape key to hide the Swatches panel.
- **11** Click Horizontal Grid(2) in the Plane Switching Widget.
- **12** Position the pointer over the upper-left point of the first rectangle you drew (circled in the figure below). Click and drag across, snapping the pointer to the upper-right point of the second rectangle you drew.





Select the Right Grid.

Draw the rectangle.



Select the Horizontal Grid.



Draw the rectangle.

**13** In the Control panel, change the Fill color to a light gray swatch with the tool tip "C=0 M=0 Y=0 K=10." Press the Escape key to hide the Swatches panel.

Now you will add artwork to the perspective grid.

- 1 Choose View > Fit All In Window.
- 2 Click and hold down on the Perspective Grid tool (℡) in the Tools panel, and select the Perspective Selection tool (►).

• Note: As you drag in this step, the pizza gets bigger and smaller in perspective. Try to center the pizza on the box top as best you can. 3 Make sure that the Horizontal grid is selected in the Plane Switching Widget (see the previous figure). Drag the pizza slice by the crust (see the red X) from the artboard

CityPizza

on the right onto the top of the pizza box.

- 4 Choose Object > Arrange > Bring To Front to put the pizza on top of the box.
- **5** Although the pizza may still be selected, click it again to make the first artboard the active artboard.
- 6 Choose Select > All On Active Artboard. Choose Object > Group.
- 7 Select the Selection tool (k), and drag the pizza group onto the right artboard. Click OK in the dialog box that appears.



**8** Choose View > Perspective Grid > Hide Grid.

# Placing images in Illustrator

In Illustrator, you can place raster images, like JPEG (jpg, jpeg, jpe) and Adobe Photoshop<sup>\*</sup> (psd, pdd) files, and either link to them or embed them. Next, you will place an image of a tomato.

- Choose File > Place. In the Place dialog box, navigate to the Lesson00 folder in the Lessons folder and select the tomato.psd file. Make sure that the Link option in the dialog box is selected, and click Place.
- **2** Click to place the tomato just to the right of the pizza box.
- 3 With the Selection tool (♠), drag the tomato so that it looks like the figure.



Click to place the tomato.





Reposition the tomato.

• Note: Learn more about placing images in Lesson 15, "Combining Illustrator CC Graphics with Other Adobe Applications."

# Using Image Trace

You can use Image Trace to convert photographs (raster images) into vector artwork. Next, you will trace the Photoshop file.

- 1 Choose View > Fit Artboard In Window.
- 2 Choose Window > Image Trace to open the Image Trace panel. In the panel, click the Low Color button (I) at the top.

The image is converted to vector paths, but it is not yet editable.

- In the Image Trace panel, click the toggle arrow to the left of Advanced. Select Ignore White near the bottom of the panel. Close the Image Trace panel.
- 4 With the tomato still selected, click the Expand button in the Control panel to make the object editable.

The tomato image is now a series of vector shapes that are grouped together.

- 5 Choose Edit > Copy, and then choose Edit > Paste. With the Selection tool, drag the copy into position next to the original tomato.
- **6** Choose Select > Deselect.

# Working with Effects

Effects alter the appearance of an object without changing the base object. Next you will apply the Drop Shadow effect to several objects.

- With the Selection tool (), press and hold the Shift key and then click the text "City Pizza," the pizza box, and each tomato. Release the key when you are finished selecting.
- 2 Choose Effect > Stylize > Drop Shadow. In the Drop Shadow dialog box, make sure that the Mode is Multiply, the Opacity is 75%, the X Offset and Y Offset are 7 pt, and the Blur is 5 pt. Select Preview, and then click OK.
- 3 Choose File > Save, and then choose File > Close.







• Note: Learn more about effects in Lesson 12, "Applying Effects."





• Note: Learn more about Image Trace in Lesson 3, "Creating and Editing Shapes."

# **4** TRANSFORMING OBJECTS

# Lesson overview

In this lesson, you'll learn how to do the following:

- Add, edit, rename, and reorder artboards in an existing document.
- Navigate artboards.
- Work with rulers and guides.
- Move, scale, and rotate objects using a variety of methods.
- Reflect, shear, and distort objects.
- Position objects with precision.
- Position with measurement labels.
- Use the Free Transform tool to distort an object.



This lesson takes approximately an hour to complete.

Download the project files for this lesson from the Lesson & Update Files tab on your Account page at www.peachpit.com and store them on your computer in a convenient location, as described in the Getting Started section of this book.

Your Accounts page is also where you'll find any updates to the chapters or to the lesson files. Look on the Lesson & Update Files tab to access the most current content.



You can modify objects in many ways as you create artwork, by quickly and precisely controlling their size, shape, and orientation. In this lesson, you'll explore creating and editing artboards, the various Transform commands, and specialized tools, while creating several pieces of artwork.

# **Getting started**

In this lesson, you'll create content and use it to create a flyer, a "save the date" card (front and back), and an envelope. Before you begin, you'll restore the default preferences for Adobe Illustrator and then open a file containing the finished artwork to see what you'll create.

- To ensure that the tools and panels function exactly as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CC preferences file. See "Restoring default preferences," on page 3.
- 2 Start Adobe Illustrator CC.

• Note: If you have not already downloaded the project files for this lesson to your computer from your Account page, make sure to do so now. See "Getting Started" at the beginning of the book.

3 Choose File > Open, and open the L4end.ai file in the Lesson04 folder, located in the Lessons folder on your hard disk.

This file contains the three pieces of finished artwork: a flyer, a "save the date" card (front and back), and an envelope. This lesson contains a fictitious business name,



address, and website address made up for the purposes of the project.

4 Choose View > Fit All In Window, and leave the artwork onscreen as you work. If you don't want to leave the file open, choose File > Close (without saving).

To begin working, you'll open an existing art file.

- 5 Choose File > Open to open the L4start.ai file in the Lesson04 folder, located in the Lessons folder on your hard disk.
- 6 Choose File > Save As. In the Save As dialog box, name the file recycle.ai, and navigate to the Lesson04 folder. Leave the Save As Type option set to Adobe Illustrator (\*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and then click



Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.

7 Choose Window > Workspace > Reset Essentials.

• Note: In Mac OS, you may need to click the round, green button in the upper-left corner of the Document window to maximize the window's size.

• Note: If you don't see "Reset Essentials" in the Workspace menu, choose Window > Workspace > Essentials before choosing Window > Workspace > Reset Essentials.

# Working with artboards

Artboards represent the regions that can contain printable artwork, similar to pages in Adobe InDesign. You can use multiple artboards for creating a variety of things, such as multiple-page PDF files, printed pages with different sizes or different elements, independent elements for websites, or video storyboards, for instance.

# Adding artboards to the document

You can add and remove artboards at any time while working in a document. You can create artboards in different sizes, resize them with the Artboard tool or Artboards panel, and position them anywhere in the Document window. All artboards are numbered and can have a unique name assigned to them.

Next, you will add more artboards to create the "save the date" card (front and back) and the envelope.

- 1 Choose View > Fit Artboard In Window. This is the first artboard.
- 2 Press the spacebar to temporarily access the Hand tool (⟨™)). Drag the artboard to the left until you see the dark canvas off the right side of the artboard.
- 3 Select the Artboard tool (井) in the Tools panel. Position the Artboard tool pointer to the right of the existing artboard and in line with its top edge (a green alignment guide appears). Drag down and to the right to create an artboard that is 9 in (width) by 4 in (height). The measurement label indicates when the artboard is the correct size.

**Tip:** If you zoom in on an artboard, the measurement label has smaller increments.



- 4 Click the New Artboard button () in the Control panel. This allows you to create a duplicate of the last selected artboard.
- 5 Position the pointer below the lower-left corner of the new artboard. When a vertical green alignment guide appears, click to create a new artboard. This is Artboard 3.
- 6 Select the Selection tool () in the Tools panel.



Click the Artboards panel icon () on the right side of the workspace to expand the Artboards panel.

Notice that Artboard 3 is highlighted in the panel. The active artboard is always highlighted in this panel.

The Artboards panel allows you to see how many artboards the document currently contains. It also

allows you to reorder, rename, add, and delete artboards and to choose many other options related to artboards.

Next, you will create a copy of an artboard using this panel.

8 Click the New Artboard button () at the bottom of the panel to create a copy of Artboard 3, called Artboard 4.

Notice that a copy is placed to the right of Artboard 2 in the Document window (the first artboard you created).



**Tip:** With the Artboard tool (井), you can also copy an artboard

by holding down the Alt (Windows) or Option (Mac OS) key and dragging it until the copied artboard clears the original. When creating new artboards, you can place them anywhere—you can even overlap them.

- 9 Click the Artboards panel icon to collapse the panel.
- **10** Choose View > Fit All In Window to see all of your artboards.



# **Resizing artboards**

You can edit or delete artboards at any time by using the Artboard tool, menu commands, or the Artboards panel. Next, you will reposition and change the sizes of several of the artboards using multiple methods.

 Select the Artboard tool (☆) in the Tools panel, and click Artboard 4 in the Document window (the last one you made), to make sure it's selected.

Next, you will resize an artboard by entering values in the Control panel.



2 Select the upper-left point in the reference point locator () in the Control panel.

This allows you to resize an artboard from the upper-left corner of the artboard. By default, artboards are resized from their center.

With the artboard named "04 – Artboard 4" selected in the Document window, in the Control panel, change the width to 9.5 in and press Enter or Return. Make sure that the height is 4 in.



You can see the Constrain Width and Height Proportions icon () in the Control panel, between the Width and Height fields. This icon, if selected (), allows both fields to change in proportion to each other.

Another way to resize an artboard is to do so manually, using the Artboard tool, which is what you'll do next.

- 4 With Artboard 4 (04 Artboard 4) still selected, choose View > Fit Artboard In Window.
- **5** With the Artboard tool selected, drag the bottom-center bounding point of the artboard down until the height is 4.15 in, as shown in the measurement label.



**Tip:** To delete an artboard, select the artboard with the Artboard tool and either press Delete, click the Delete Artboard button () in the Control panel, or click the Delete icon () in the upperright corner of an artboard. You can delete all but one artboard.

- 6 With Artboard 4 (04 Artboard 4) still selected, click the Show Center Mark button () in the Control panel to show a center mark for the active artboard only. The center mark can be used for many purposes, including working with video content.
- **7** Select the Selection tool (**)**, and choose View > Fit All In Window.

Notice the subtle black outline around Artboard 4, and "4" showing in the Artboard Navigation menu (lower-left corner of the Document window), which both indicate that Artboard 4 is the currently active artboard.

Note: If you don't see the Width (W) and Height (H) fields in the Control panel, click the Artboard Options button () in the Control panel and enter the values in the dialog box that appears.

• Note: Clicking the Artboard Options button () in the Control panel, with the Artboard tool selected, also allows you to display the center mark for an artboard. 8 Click the Artboards panel icon () to show the Artboards panel (Window > Artboards). Click the name "Artboard 1" in the Artboards panel to make it the active artboard.

This is the original artboard. Notice that a dark border appears around Artboard 1 in the Document window. This indicates that it is active. There can only be one active artboard at a time. Commands such as View > Fit Artboard In Window apply to the active artboard.

Next, you will edit the active artboard size by choosing a preset value.

9 Click the Artboard Options button () to the right of the name "Artboard 1" in the Artboards panel. This opens the Artboard Options dialog box.



**Tip:** The Artboard Options button appears to the right of the name of each artboard in the Artboards panel. It not only allows access to the artboard options for each artboard but also indicates the orientation of the artboard.

**10** Find the reference point locator () to the left of the X and Y values, and make sure that the upper-left point is still selected. This ensures that the artboard is resized from the upper-left corner. Choose Letter from the Preset menu, and click OK.

Artboard Options								
Name: Artboard 1								
Preset: Letter								
Width: 11 in								
Height: 8.5 in 855 /: 0 in								
Orientation: 👔 🕅								
Constrain proportions  Current proportions: 1.29								

The Preset menu lets you change a selected artboard to a set size. Notice that the sizes in the Preset menu include typical print, video, tablet, and web sizes. You can also fit the artboard to the artwork bounds or the selected art, which is a great way to fit an artboard to a logo, for instance.

# **Editing document setup options**

When working with artboards for the current document, you can change default setup options, like units of measure, bleed guides, type settings (such as language), and more in the Document Setup dialog box.

Next, you'll add bleed guides to the artboards.

With the Selection tool () still selected (but no art selected), click the Document Setup button in the Control panel (or choose File > Document Setup) to open the Document Setup dialog box.

2 In the Document Setup dialog box, change the Top Bleed option to 0.125 in by clicking the up arrow to the left of the field. Notice that all the values change together, because Make All Settings The Same (3) is selected. Click OK.

• Note: Know that all changes made in the Document Setup dialog box apply to all artboards in the current document.



- **3** Select the Artboard tool (≒) in the Tools panel.
- 4 Click the upper-right artboard (04 Artboard 4), and drag it below the original letter-sized artboard (01 Artboard 1). Align the left edges of the artboards.



• Note: When you drag an artboard with content on it, the art moves with the artboard, by default. If you want to move an artboard but not the art on it, select the Artboard tool and then click to deselect Move/ Copy Artwork With Artboard (

You can reposition artboards at any time and even overlap them, if necessary.

- **5** Select the Selection tool in the Tools panel to stop editing the artboards.
- 6 Choose Window > Workspace > Reset Essentials, and then choose File > Save.

# **Renaming artboards**

By default, artboards are assigned a number and a name. When you navigate the artboards in a document, it can be helpful to name them.

Next, you are going to rename the artboards so that the names are more useful.

- 1 Click the Artboards panel icon (
  ) to show the Artboards panel.
- **2** Double-click the name "Artboard 1" in the Artboards panel. Change the name to **Flyer**, and press Enter or Return.

**Tip:** You can also change the name of an artboard by clicking the Artboard Options button () in the Artboards panel and changing the name in the Artboard Options dialog box. Another way is to double-click the Artboard tool () in the Tools panel to change the name for the currently active artboard in the Artboard

Options dialog box. You can make an artboard the currently active artboard by clicking it with the Selection tool (**\)**.

Layer	Arthoard	•	<b>\</b>	₩	•
1	Flyer				
2	Anthered 2		 <b>/</b>		
	Artboard 3				
	Artboard 4				
4 Artb	oards		7		
-		IIIIBIIII			

You will now rename the rest of the artboards.

- **3** Double-click the name "Artboard 2" in the panel, and change the name to **Card-front**.
- 4 Rename the remaining two artboards, changing "Artboard 3" to **Card-back** and "Artboard 4" to **Envelope**.
- 5 Choose File > Save, and keep the Artboards panel showing for the next steps.

#### **Reordering artboards**

When you navigate your document, the order in which the artboards appear can be important, especially if you are navigating the document using the Next artboard and Previous artboard buttons. By default, artboards are ordered according to the order in which they are created, but you can change that order. Next, you will reorder the artboards so that the two sides of the card are in the correct order.

- With the Artboards panel still open, click the name "Envelope" in the panel. This makes the Envelope artboard the active artboard and fits it in the Document window.
- 2 Choose View > Fit All In Window.
- **3** Position the pointer over the Envelope artboard listed in the Artboards panel. Click and drag up until a line appears between the Flyer and Cardfront artboards. Release the mouse button.

This moves the artboard up in order so that it becomes the second artboard in the list.



4 Double-click to the right or left of the name "Flyer" in the Artboards panel to fit that artboard in the Document window.

5 Click the Next artboard button (▶) in the lower-left corner of the Document window to navigate to the next artboard (Envelope). This fits the Envelope artboard in the Document window.

If you had not changed the order, the next artboard would have been the Card-front artboard.

6 Choose File > Save.

Now that the artboards are set up, you will concentrate on transforming artwork to create the content for your project.

Tip: You can also reorder the artboards by selecting an artboard in the Artboards panel and clicking the Move Up (() or Move Down () button at the bottom of the panel.



# **Transforming content**

Transforming content allows you to move, rotate, reflect, scale, shear, and either free distort or perspective distort objects. Objects can be transformed using the Transform panel, selection tools, specialized tools, Transform commands, guides, Smart Guides, and more. For the remainder of the lesson, you will transform content using a variety of methods and tools.

# Working with rulers and guides

*Rulers* help you accurately place and measure objects. They appear at the top and left of the Document window and can be shown and hidden. *Guides* are non-printing lines that help you align objects. Next, you will create a few guides based on ruler measurements so that later you can more accurately align content.

- In the Artboards panel, double-click to the right or left of the name "Card-front" to fit that artboard in the Document window.
- 2 Choose View > Rulers > Show Rulers, if you don't see the rulers.
- 3 Shift-drag from the left vertical ruler toward the right to create a vertical guide at 1/2 inch on the horizontal ruler. Notice, as you drag with the Shift key pressed, that the guide "snaps" to the measurements on the ruler. (The guide snaps because the Shift key is pressed.) Release the mouse button, and then release the Shift key. The guide is selected.



**Tip:** To change the units for a document, you can right-click (Windows) or Ctrl-click (Mac OS) either ruler and choose the new units.

Take a look at the rulers, and notice the point where 0 appears on each ruler. The point on each ruler where the vertical 0 and the horizontal 0 appear is called the *ruler origin*. By default, the ruler origin is in the upper-left corner of the active artboard. As you can see, the 0 point on both rulers corresponds to the edges of the active artboard.

There are two types of rulers in Illustrator: *artboard rulers* and *global rulers*. Artboard rulers, which are the default rulers that you are seeing, set the ruler origin at the upper-left corner of the *active* artboard as shown, in the figure above. Global rulers set the ruler origin at the upper-left corner of the *first* artboard, no matter which artboard is active.

- 4 Choose View > Fit All In Window.
- 5 With the Selection tool (), click each of the artboards and, as you do, look at the horizontal and vertical rulers. Notice that the 0 for each ruler is always in the upper-left corner of the active (selected) artboard.

• Note: You may not see "1/2" in your ruler, and that's okay. You can zoom in until you see "1/2" using any method, including View > Zoom In. Zooming in to your document shows finer measurement increments in the rulers.

Note: You could switch between artboard and global rulers by choosing View > Rulers > and selecting Global or Artboard, (depending on which option is currently chosen), but don't do that now.

- **6** In the Artboards panel, double-click to the right or left of the name "Card-front" to fit that artboard in the Document window.
- 7 With the Selection tool, click the guide to select it, if necessary (it will be orange in color when selected). Change the X value in the Control panel to **.25 in**, and press Enter or Return.

• Note: If you don't see the X value, you can click the word "Transform" or open the Transform panel (Window > Transform).

Guides are similar to drawn objects in that they can be selected like a drawn line, and they can be deleted by pressing the Backspace or Delete key.

8 Position the pointer in the upper-left corner of the Document window, where the rulers intersect (), and drag the pointer to the upper-right corner of the artboard (not to the corner of the red bleed guides). When the word "intersect" appears, release the mouse button.

As you drag, a cross hair in the window and in the rulers indicates the changing ruler origin. This sets the ruler origin (0,0) to the upper-right corner of the artboard.



Next, you'll add a guide using a different method that can sometimes be faster.

- 9 Shift-double-click the horizontal ruler at the 1/4 inch mark, to the left of the 0 on the ruler. This creates a guide that crosses the right edge of the artboard.
- 10 With the guide selected (it should be orange when selected), check the X value in the Control panel, making sure it's -0.25 in.

Essentials

On the horizontal ruler, measurements to the right of 0 (zero) are positive and to the left are

negative. On the vertical ruler, measurements below 0 (zero) are positive and above are negative.

- **11** Position the pointer in the upper-left corner of the Document window, where the rulers intersect, and double-click to reset the ruler origin.
- 12 Choose View > Guides > Lock Guides to prevent them from being accidentally moved. Choose View > Fit All In Window.

The guides are no longer selected and are aqua in color, by default.

► Tip: If you Ctrldrag (Windows) or Command-drag (Mac OS) from the ruler intersect, you create a horizontal and vertical guide that intersects where you release the mouse button and then release the Ctrl or Command key.

# **Scaling objects**

So far, you've scaled most content with the selection tools. In this lesson, you'll use several other methods to scale the objects. First, you'll set a preference to scale strokes and effects. Then, you'll scale a logo by using the Scale command and aligning that logo to a guide.

- 1 With the Selection tool (♠), click to select the large yellow/green wheel logo on the Flyer artboard.
- 2 Open the Transform panel by clicking the X, Y, W, or H link in the Control panel (or the word "Transform" if that appears in the Control panel). Select Scale Strokes & Effects.

By default, strokes and effects, like drop shadows, are not scaled along with objects. For instance, if you enlarge a circle with a 1 pt stroke, the stroke remains 1 pt. But by



selecting Scale Strokes & Effects before you scale—and then scaling the object that 1 pt stroke would scale (change) relative to the amount of scaling applied to the object.

**3** Alt-drag (Windows) or Option-drag (Mac OS) the object to the upper-right artboard to copy the logo. Release the mouse button and then release the key, when the logo is in position.



- 4 Select the Zoom tool ( ) in the Tools panel, and click twice, slowly, on the new wheel logo, to zoom in.
- **5** Choose View > Hide Edges.

This hides the inside edges of the shapes, not of the bounding box. It can make it easier to see the artwork.

**Tip:** The Scale dialog box can also be accessed by choosing Object > Transform > Scale.

• Note: When snapping to a point, the snapping alignment depends on the position of the pointer, not on the edges of the dragged object. Also, you can snap points to guides because the View > Snap To Point command is selected by default.

- **6** Double-click the Scale tool ( $\square$ ) in the Tools panel.
- In the Scale dialog box, change Uniform to 50%.
   Select Preview (if it's not already selected). Deselect and then select Preview to see the change in size. Click OK.

You could have also selected Scale Strokes & Effects in the Scale dialog box.



Next, you will drag the logo so

that the left edge of the logo roughly aligns with the guide.

8 Select the Selection tool (k), and position the pointer over the left edge of the lowerleft arrow head in the wheel. When you see the word "anchor" appear, drag the wheel to the left until the pointer snaps to the guide. The pointer turns white when it is snapped.

• Note: You may need to turn off the Smart Guides in order to snap the content to the guide (View > Smart Guides). If you do turn them off, turn them back on after you have completed the step.

9 Choose View > Fit All In Window, and then choose View > Show Edges.



- **11** With the Selection tool, drag a marquee across the text that starts with "YOU DONATE YOUR" and ends with "KEEP MAKING ART," on the first artboard (Flyer), to select it all. Choose Edit > Copy.
- **12** Choose 3 Card-front from the Artboard Navigation menu in the lower-left corner of the Document window to return to the Card-front artboard.
- **13** Choose Edit > Paste In Place.

This command pastes the grouped content in the same relative position on the Card-front artboard as it was on the Flyer artboard.

14 In the Control panel, click the middle-left reference point of the reference point locator () to set the reference point. Click to select the Constrain Width And Height Proportions icon (), located between the W and H fields. Type 75% in the Width (W) field, and then press Enter or Return to decrease the size of the grouped text.





Enter 75% for the width.



Notice the result.

• **Note:** Depending on the resolution of your screen, the Transform options may not appear in the Control panel. If they do not appear, you can click the word "Transform" to see the Transform panel or you can choose Window > Transform.

**15** Choose View > Preview, and then choose File > Save.

You will position the text, along with other content, later in the lesson.

# **Reflecting objects**

When you *reflect* an object, Illustrator flips the object across an invisible vertical or horizontal axis. In a similar way to scaling and rotating, when you reflect an object, you either designate the reference point or use the object's center point, by default.

Next, you'll move content onto an artboard and use the Reflect tool to flip it 90° across the vertical axis and copy it.

- Choose View > Fit All In Window. Press Ctrl+- (Windows) or Command+-(Mac OS), twice, to zoom out to see the bicycle off the left edge of the Flyer artboard.
- With the Selection tool (), click on the bicycle (and not the area around it) to select it. Choose Edit > Cut.
- **3** Choose 4 Card-back from the Artboard Navigation menu in the lower-left corner of the Document window to return to the Card-back artboard.
- **4** Choose Edit > Paste, to paste the bicycle in the center of the Document window.

5 With the Selection tool, drag the bicycle down into the lower-right corner of the artboard. Try to approximately align the right side of the bicycle with the right guide, using the figure as a guide. It doesn't have to be exact.



- **6** With the bicycle still selected, choose Edit > Copy and Edit > Paste In Front to put a copy directly on top.
- Select the Reflect tool (A), which is nested within the Rotate tool (A) in the Tools panel. Click the left edge of the front bicycle tire (the word "anchor" or "path" may appear).

This sets the invisible axis that the shape will reflect around on the left edge of the bicycle, rather than on the center, which is the default.



**Tip:** You can reflect and copy in one step. With the Reflect tool selected, Alt-click (Windows) or Option-click (Mac OS) to set a point to reflect around and to open the Reflect dialog box, in one step. Select Vertical, and then click Copy.

8 With the bicycle copy still selected, position the pointer off the left edge and drag clockwise. As you are dragging, hold down the Shift key. When the measurement label shows –90°, release the mouse button and then release the modifier key.



The Shift key constrains the rotation to 45° as it is reflected. Leave the new bicycle where it is for now. You'll move it a bit later.

**Tip:** If all you want to do is flip content in place, you can also choose Flip Horizontal or Flip Vertical from the Transform panel menu ()).

# **Rotating objects**

You rotate objects by turning them around a designated reference point. There are lots of ways to do this, including methods that range from more precise to more free-form rotation.

Next, you'll precisely rotate one of the wheels using the Rotate command.

- 1 Choose 1 Flyer from the Artboard Navigation menu in the lower-left corner of the Document window.
- 2 Select the Zoom tool (), and drag a marquee across the small, black wheel logo in the upper-left corner of the Flyer artboard.
- 3 With the Selection tool (♠), select the small, black wheel. Choose Object > Transform > Rotate.

By default, the wheel logo will rotate around its center.

4 In the Rotate dialog box, make sure that Preview is selected. Change the angle to 20, and then click OK to rotate the wheel around the center.

**Tip:** If you select an object and then select the Rotate tool, you can Alt-click (Windows) or Option-click (Mac OS) anywhere on the object

(or artboard) to set a reference point and to open the Rotate dialog box in one step.

- 5 With the Selection tool, and with the small wheel logo selected, press the Shift key and click the text to the right of logo that begins, "THE CHILDREN'S ART CENTER," to select both.
- 6 Choose Edit > Cut.
- 7 Choose 2 Envelope from the Artboard Navigation menu, and choose Edit > Paste In Place.
- 8 Click the word "Transform" in the Control panel to open the Transform panel. With the middle-left point chosen in the reference point locator (#), change the X value to .25 in and the Y value to 0.6 in. Press Enter or Return to hide the panel again.





Tip: To access the Rotate dialog box, you can also doubleclick the Rotate tool () in the Tools panel. The Transform panel (Window > Transform) also has a rotate option. Next, you'll rotate content manually, using the Rotate tool (①).

- 9 Choose View > Fit All In Window.
- 10 With the Selection tool, click to select the large yellow/green wheel logo on the Flyer artboard. Choose View > Hide Edges.
- 11 Select the Rotate tool (<sup>()</sup>), which is nested within the Reflect tool (<sup>()</sup>) in the Tools panel. Click the approximate center of the wheel part of the logo to set the reference point (<sup>()</sup>) (just above where the reference point, is by default). Position the pointer to the right of the wheel logo, and drag up. Notice that the movement is constrained to a circle rotating around the reference point. When the measurement label shows approximately 20°, release the mouse button.



Next, you will rotate the wheel logo on the 3 Card-front artboard in the same way.

- 12 Choose 3 Card-front from the Artboard Navigation menu in the lower-left corner of the Document window. Select the Selection tool, and click to select the yellow/green wheel logo.
- 14 Choose View > Show Edges, and then choose File > Save.

#### Distorting objects with effects

You can distort the original shapes of objects in different ways, using various tools. Now, you'll distort a logo shape, first using the Pucker & Bloat effect and then applying the Twist effect to twirl the shape. These are different types of transformations because they are applied as effects, which means you could ultimately edit the effect later or remove it in the Appearance panel.

Note: To learn more about effects, see Lesson 12, "Applying Effects."

1 Click the First button (III) in the status bar to navigate to the first artboard.

- 2 Click the Layers panel icon (☑) to open the panel, and then click the visibility column (circled in figure) to the left of the Flyer Background layer name to show that content.
- 3 Select the Selection tool (), and click to select the white triangle in the lower-right corner of the Flyer artboard.



- 4 Choose Effect > Distort & Transform > Pucker & Bloat.
- 5 In the Pucker & Bloat dialog box, select Preview and drag the slider to the left to change the value to roughly –60%, which distorts the triangle. Click OK.



6 Choose Effect > Distort & Transform > Twist. Change the Angle to 20, select Preview (if it's not already selected), and then click OK.



7 Choose Select > Deselect, and then choose File > Save.

# **Shearing objects**

*Shearing* an object slants, or skews, the sides of the object along the axis you specify, keeping opposite sides parallel and making the object asymmetrical.

Next, you'll copy a bicycle object and apply shear to it.

- 1 Click the Artboards panel tab. Double-click the 4 to the left of the Card-back artboard name. Click the Artboards panel tab to collapse the panel group.
- 2 Select the Selection tool (). Click to select the bicycle shape on the left. Choose Object > Hide > Selection. Click to select the remaining bicycle shape.
- **3** Choose Edit > Copy, and then choose Edit > Paste In Front to paste a copy directly on top of the original.

4 Select the Shear tool (元), nested within the Scale tool (元) in the Tools panel. Position the pointer at the bottom of the bicycle shape, between the wheels, and click to set the reference point.



**5** Drag from the approximate center of the bicycle

to the left, and stop when the sheared copy looks like what you see in the figure. Release the mouse button.



**Tip:** You can also apply shear numerically in the Transform panel (Window > Transform) or in the Shear dialog box (Object > Transform > Shear).

- 6 Change the Opacity value in the Control panel to **20%**.
- 7 Choose Object > Arrange > Send Backward to put the copy behind the original bicycle shape.





- 8 Choose Object > Show All to show and select the reflected bicycle copy you hid earlier. Choose Edit > Cut to cut the bicycle from the artboard.
- **9** Choose 2 Envelope from the Artboard Navigation menu in the lower-left corner of the Document window. Choose Edit > Paste.
- **10** Choose Select > Deselect, and then choose File > Save.

# Positioning objects precisely

At times, you may want to position objects more precisely—either relative to other objects or in relation to the artboard. You can use the Smart Guides and the Transform panel to move objects to exact coordinates on the x and y axes and to control the position of objects in relation to the edge of the artboard.

Next, you'll add content to the backgrounds of both sides of the card and then position that content precisely.

- 1 Choose View > Fit All In Window to see all of the artboards.
- 2 Press Ctrl+- (Windows) or Command+- (Mac OS) (or View > Zoom Out) once to zoom out. You should see two images off the left edge of the Flyer artboard.
- **3** With the Selection tool  $(\mathbf{k})$ , click to select the top, darker image.



4 Click the Artboards panel icon (), if the panel isn't showing. Click the 3 Card-front artboard name in the list, once, to make it the active artboard.

The ruler origin is now in the upper-left corner of that artboard.

**5** Click the upper-left point of the reference point locator (**ESS**) in the Control panel. Then, change the X value to **0** and the Y value to **0**.



**6** Choose Object > Arrange > Send to Back, and then choose Select > Deselect.

The image should now be precisely positioned on the artboard, since it was the same size as the artboard to begin with.



• Note: Again, depending on the resolution of your screen, the Transform options may not appear in the Control panel. If they do not appear, you can click the word "Transform" to see the Transform panel, or you can choose Window > Transform.

- 7 Choose View > Fit Artboard In Window to fit the 3 Card-front artboard in the Document window.
- 8 With the Selection tool, hold down the Shift key and, in the text on the right, drag to the left from the word "YOU" until the right edge of the "h" in "MAY 19th" is aligned with the right guide. Release the mouse button, and then release the Shift key.



- **9** In the Artboards panel, click once on the name "4 Card-back" in the list to make it the active artboard. Click the Artboards panel tab to collapse the panel group.
- **10** Choose View > Fit All In Window to see all of the artboards.
- 11 Press Ctrl+- (Windows) or Command+- (Mac OS) once to zoom out.

You should see the second, lighter image off the left edge of the Flyer artboard.

- **12** With the Selection tool, click to select that image.
- **13** With the upper-left point of the reference point locator (**MB**) selected in the Control panel, change the X value to **0** and the Y value to **0**.



- **14** Choose Object > Arrange > Send to Back.
- **15** Choose View > Fit Artboard In Window to fit the 4 Card-back artboard in the Document window.

# **Positioning with Smart Guides**

When moving objects with the Smart Guides turned on (View > Smart Guides), measurement labels appear next to the pointer and display the distance (X and Y) from the object's original location. You will use these to make sure that an object is a certain distance from the edge of the artboard.

- Press Ctrl+- (Windows) or Command+- (Mac OS), *twice*, to zoom out. You should see the text group off the right edge of the artboard.
- 2 With the Selection tool (♠), click to select the text group. With the upper-left point of the reference point locator () in the Control panel selected, change the X value to **0** and the Y value to **0**.
- **3** Choose View > Fit Artboard In Window.
- 4 Using the Selection tool, position the pointer over the word "YES" and drag the text group down and to the right. When the measurement label shows dX: 0.25 in and dY: 0.5 in, release the mouse button.



If you can't get the exact values, that's okay.



The dX indicates the distance moved along the x axis (horizontally), and dY indicates the distance moved along the y axis (vertically).

• Note: You can also choose Edit > Preferences > Smart Guides (Windows) or Illustrator > Preferences > Smart Guides (Mac OS) and deselect the Measurement Labels option to turn off just the measurement labels when Smart Guides are on.

- 5 With the text group still selected, choose Object > Arrange > Bring To Front, to bring the text on top of the other content on the artboard.
- 6 Click away from the artwork to deselect it, and then choose File > Save.

# Transforming with the Free Transform tool

The Free Transform tool () is a multipurpose tool that allows you to distort an object, combining functions like moving, scaling, shearing, rotating, and distorting (perspective or free). The Free Transform tool is also touch-enabled, which means you can control transformation using touch controls on certain devices. For more information on touch controls, see the sidebar at the end of this section.

- 1 Choose 2 Envelope from the Artboard Navigation menu in the lower-left corner of the Document window.
- **2** Click to select the bicycle on the artboard with the Selection tool  $(\mathbf{k})$ .

**3** Select the Free Transform tool () in the Tools panel.

After selecting the Free Transform tool, the Free Transform widget appears in the Document window. This widget, which is free-floating and can be repositioned, contains options to change how the Free Transform tool works. By default, the Free Transform tool allows you to move,



shear, rotate, and scale objects. By selecting other options, like Perspective Distort, you can change how the tool transforms content.

Next, you'll use the Free Transform tool to apply multiple transformations to the selected bicycle.

- 4 Choose View > Hide Edges.
- 5 Position the pointer over the left-middle point of the bicycle bounding box, and the pointer changes its appearance (4+), indicating that you can shear or distort. Drag to the right. As you drag to the right, notice that you can't drag up or down—the movement is constrained to horizontal. When a width of approximately 2.8 in shows in the



measurement label below the widget, release the mouse button.

• Note: If you were to drag the side bounding point up first to distort the bicycle by shearing, the movement wouldn't be constrained and you could move in any direction.

Next, you are going to rotate the bicycle around the lower-right bounding point, so you will set the reference point before rotating.

• Note: To learn more about the Free Transform tool options, search for "Free Transform" in Adobe Help (Help > Illustrator Help). 6 Position the pointer over the upper-right bounding point. When the pointer changes (\*☆), press the Shift key and drag toward the center of the bike to make it smaller. When the measurement label shows a height of 2.75 in, release the mouse and then the modifier key.



7 Position the pointer over the lower-right bounding point, and

double-click when the pointer looks like this ( $\swarrow$ ). This moves the reference point and ensures that the bicycle will rotate around it.

8 Position the pointer directly over the upper-left corner of the bicycle bounding box. The pointer changes appearance (<sup>\*</sup>→<sup>\*</sup>), indicating that you can rotate or scale. Click and drag in a clockwise motion until you see approximately -5° in the measurement label below the widget.

• Note: If you find that, by trying to rotate,

you are instead scaling, stop dragging and choose Edit > Undo Scale and try again.

Like other transform tools, by holding down the Shift key while dragging with the Free Transform tool, you can constrain the movement for most of the transformations. If you don't want to hold down the Shift key, you can also select the Constrain option in the widget (circled at right) before transforming, to constrain movement automatically. After dragging, the Constrain option is deselected.

• **Note:** The Constrain option cannot be selected when the Perspective Distort option is selected.

**9** With the Free Transform tool still selected, click the Perspective Distort option in the Free Transform widget (circled in the figure).

With this option selected, you can drag a corner point of the bounding box to distort the perspective.



► Tip: You can also just drag the reference point to a location. The reference point is reset to the center of the object immediately after an action is performed. You can double-click the reference point to reset its position.



[]]

• Note: The Free Distort option of the Free Transform tool allows you to freely distort the selected content by dragging one of the corner bounding points.

- 10 Position the pointer over the upperleft corner of the bounding box, and the pointer changes in appearance (<sup>h</sup><sub>1</sub>). Drag down until a height of approximately 2.5 in shows in the measurement label beneath the widget.
- **11** Select the Selection tool, and drag the bicycle until the left edge is close to the left edge of the artboard.
- **12** Choose View > Show Edges.
- **13** Change the Opacity to **20%** in the Control panel.
- **14** Choose File > Save, and then choose File > Close.

# Applying multiple transformations

There are a lot of ways to speed up transformations in Illustrator. One of those ways is to use the Transform Each command. To learn more about this command, open the PDF file, "Multi\_transforms.pdf," in the Lesson\_extras folder in the Lessons folder.





# The Free Transform tool and touch-enabled devices

In Illustrator CC, the Free Transform tool is touch-enabled. This means that, if you are using either a Windows 7– or 8–based touchscreen PC or a Touchscreen device, like Wacom Cintig 24HD Touch, you can utilize certain touch-enabled features.

Here are a few noteworthy examples:

- You can touch and drag from the center of an object and move the reference point.
- Double tapping on any of the corner points moves the reference point for the object to that point.
- Double tapping on the reference point resets it to the default position (if it's not already there).
- To constrain movement, you can tap the Constrain option in the widget before transforming.

# **Review questions**

- 1 Name two ways to change the size of an existing active artboard.
- 2 How can you rename an artboard?
- **3** What is the *ruler origin*?
- 4 What is the difference between *artboard rulers* and *global rulers*?
- 5 Briefly describe what the Scale Strokes & Effects option does.
- 6 Name at least three transformations that can be applied with the Free Transform tool.

# **Review answers**

- 1 To change the size of an existing artboard, you can double-click the Artboard tool (☆) and edit the dimensions of the active artboard in the Artboard Options dialog box. Select the Artboard tool, position the pointer over an edge or corner of the artboard, and drag to resize. Select the Artboard tool, click an artboard in the Document window, and change the dimensions in the Control panel.
- 2 To rename an artboard, you can select the Artboard tool and click to select an artboard. Then, change the name in the Name field in the Control panel. You can also double-click the name of the artboard in the Artboards panel to rename it or click the Options button (I) in the Artboards panel to enter the name in the Artboard Options dialog box.
- **3** The *ruler origin* is the point where 0 (zero) appears on each ruler. By default, the ruler origin is set to be 0 (zero) in the top-left corner of the active artboard.
- **4** There are two types of rulers in Illustrator: *artboard rulers* and *global rulers*. Artboard rulers, which are the default rulers, set the ruler origin at the upper-left corner of the active artboard. Global rulers set the ruler origin at the upper-left corner of the first artboard, no matter which artboard is active.
- 5 The Scale Strokes & Effects option, found in the Transform panel (or in Edit > Preferences > General [Windows] or Illustrator > Preferences > General [Mac OS]), scales any strokes and effects as the object is scaled. This option can be turned on and off, depending on the current need.
- **6** The Free Transform tool can perform a multitude of transformation operations, including move, scale, rotate, shear, and distort (perspective distort and free distort).

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